

WHAT IS CLAIMED IS:

1. A hearing aid for disposal around at least a portion of a user's ear, said hearing aid comprising:

a case configured to snugly curve around the user's ear, said case defining an interior space and including at least one interior surface;

electronics disposed in the interior space of the case, said electronics including a microphone and a speaker;

a battery mounted within the interior space and disposed proximate to the at least one interior surface of the case, said battery being laminar and configured to have a shape that conforms to the at least one interior surface of the case; and

wherein the battery is a solid-state rechargeable battery or a foil rechargeable battery.

2. The hearing aid of claim 1, wherein the case includes first and second sections that are removably attached to each other.

3. The hearing aid of claim 2, wherein the at least one interior surface is in the first section and wherein the shape of the battery conforms to a majority of the at least one interior surface.

4. The hearing aid of claim 3, wherein the battery is non-cylindrical.

5. The hearing aid of claim 4, wherein the at least one interior surface in the first section comprises a pair of spaced-apart interior surfaces, and wherein the battery has a pair of spaced-apart portions that conform to the interior surfaces, respectively.

6. The hearing aid of claim 4, wherein the first section is a removable cover and the at least one interior surface consists of a single interior surface of the cover, and wherein the shape of the battery conforms to a majority of the interior surface of the cover.

7. The hearing aid of claim 6, wherein the battery has first and second ends with first and second side edges extending therebetween, said first side edge being arcuate and said second side edge being irregular.

8. A hearing aid comprising:

electronic components including a microphone and a speaker;

a case defining an interior space within which the electronic components are disposed, said case including attached first and second sections, said first and second sections being detachable from each other so as to permit access to the electronic components, said first section having at least one interior surface;

a battery disposed within the interior space and mounted to the first section so as to be disposed proximate to the at least one interior surface thereof, said battery being laminar and configured to have a shape that conforms to the at least one interior surface of the first section; and

wherein the battery is a solid-state rechargeable battery or a foil rechargeable battery.

9. The hearing aid of claim 8, wherein the battery has positive and negative terminals, and wherein the electronics further includes a printed circuit board disposed in the interior space, said circuit board having contacts that are aligned with the positive and negative terminals of the battery.

10. The hearing aid of claim 9, wherein the printed circuit board has an overall shape that at least substantially conforms to the overall shape of the battery.

11. The hearing aid of claim 8, wherein the first section is a removable cover and the at least one interior surface consists of a single interior surface of the cover, and wherein the shape of the battery conforms to a majority of the interior surface of the cover.

12. The hearing aid of claim 11, wherein the battery has first and second ends with first and second side edges extending therebetween, said first side edge being arcuate and said second side edge being irregular.

13. The hearing aid of claim 8, wherein the at least one interior surface of the first section comprises a pair of spaced-apart interior surfaces, and wherein the battery has a pair of spaced-apart portions that conform to the interior surfaces, respectively.

14. The hearing aid of claim 8, further comprising:

a third section attached to the second section, said third section having an interior surface; and a

a second battery disposed within the interior space and mounted to the third section so as to be disposed proximate to the interior surface thereof, said second battery being laminar and configured to have a shape that conforms to a majority of the interior surface of the third section; and

wherein the second battery is a solid-state rechargeable battery or a foil rechargeable battery.

15. The hearing aid of claim 14, wherein the third section is detachable from the second section so as to provide access to the electronics.

16. The hearing aid of claim 15, wherein the second section is a frame to which the electronic components are mounted, and wherein the first and third sections are removable covers.

17. The hearing aid of claim 8, wherein the battery is non-cylindrical.

18. A hearing aid comprising:

a case having an interior surface and defining an interior space;

electronic components disposed within the interior space of the case;

a battery disposed within the interior space, said battery being configured to conform to the interior surface; and

wherein the battery has a non-cylindrical shape and is a solid-state rechargeable battery or a foil rechargeable battery.

19. The hearing aid of claim 18, wherein the case includes a cover having the interior surface, said cover being removable so as to provide access to the electronics.

20. The hearing aid of claim 19, wherein the shape of the battery conforms to a majority of the interior surface of the cover.

21. The hearing aid of claim 20, wherein the battery is mounted to the cover so as to be disposed proximate to the interior surface.

22. The hearing aid of claim 18, wherein the battery is laminar.

23. A hearing aid comprising:

a case defining an interior space, said case having at least one sound transmission hole extending therethrough for facilitating the passage of sound into the interior space;

electronic components disposed within the interior space of the case; and

a battery disposed within the interior space, said battery having at least one sound transmission hole extending therethrough that is aligned with the at least one sound transmission hole in the case.

24. The hearing aid of claim 23, wherein the battery is a solid-state rechargeable battery or a foil rechargeable battery.

25. The hearing aid of claim 24, wherein the case includes attached first and second sections, said first and second sections being detachable from each other so as to permit access to the electronic components, said first section having at least one interior surface; and

wherein the battery is disposed within the interior space, proximate to the at least one interior surface of the first section.

26. The hearing aid of claim 25, wherein the battery is configured to have a shape that conforms to a majority of the at least one interior surface of the first section.

27. The hearing aid of claim 26, wherein the at least one interior surface of the first section comprises a pair of spaced-apart interior surfaces, and wherein the battery has a pair of spaced-apart portions that conform to the interior surfaces, respectively.

28. The hearing aid of claim 27, wherein the battery includes a pair of terminals disposed on the portions of the battery, respectively.

29. The hearing aid of claim 28, wherein the terminals are disposed on interior surfaces of the portions of the battery, respectively.

30. A method of forming a hearing aid, said method comprising the steps of:

(a.) providing a case having first and second sections adapted to be removably attached to each other, said first section having at least one interior surface;

(b.) providing electronics that include a microphone and a speaker;

(c.) providing a rechargeable battery that has been especially configured to conform to the at least one interior surface of the first section, wherein the rechargeable battery is a solid-state rechargeable battery or a foil rechargeable battery;

(d.) mounting the battery to the first section of the case so as to be disposed proximate to the at least one interior surface thereof;

(e.) mounting the electronics to at least one of the first and second sections of the case when the first and second sections of the housing are separated from each other; and

(f.) after steps (d.) and (e.), attaching the first and second sections to each other so as to at least partially enclose the battery and the electronics.

31. The method of claim 30, wherein step (c.) is performed such that the battery is non-cylindrical.

32. The method of claim 31, wherein step (a.) is performed such that the at least one interior surface of the first section comprises a pair of spaced-apart interior surfaces, and wherein step (c.) is performed such that the battery comprises a pair of spaced-apart portions.

33. The method of claim 30, wherein step (c.) is performed such that the battery is laminar.